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Marco Winter

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EXAMINER

WONG, JOSEPH D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,654	Applicant(s) WINTER ET AL.	
	Examiner JOSEPH D. WONG	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060626</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-16 are objected for a minor grammatical informality of missing an appropriate article or antecedence indicator before each occurrence of “method” or “apparatus” at the beginning of each claim. Appropriate correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-11, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Karlov et al, (US 6,304,878), hereinafter Karlov.

As to claim 1, Karlov teaches method for searching a database on a disk storage medium (Fig. 1, items 29, 31, see disks), comprising execution of a first search step (Fig. 3) which is used to scan the entire database (Fig. 12) on the disk storage medium (Fig. 1, items 29, 31, see disks), provision of an intermediate result from the first search step (Fig. 12, item 1202), execution of a second search step (Fig. 12, item 1208) in the intermediate result from the first search step (Fig. 12, item 1202), and provision of an end result from the second search step (Fig. 12, :”Skip to Jump Node”; Fig. 11).

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As to claim 2, Karlov teaches method, wherein the processing speed for (intended use) the data in the first search step is at least as high as the read-in speed for the data (Fig. 12, item 1208; Col. 9, Line 3).

As to claim 3, Karlov teaches method, wherein only a text search is performed in the first search step (Fig. 11, item 1102, “search character” meets “text search”; Fig. 12, item 1202).

As to claim 8, Karlov teaches method, wherein the disk storage medium is an optical disk (Fig. 1, item 31).

As to claim 9, Karlov teaches apparatus for searching a database on a disk storage medium (Fig. 1, items 29, 31, see disks), comprising a search device for executing a first search step (Fig. 3) which can be used to scan the entire database (Fig. 12) on the disk storage medium (Fig. 1, items 29, 31, see disks), and a memory device for storing and providing an intermediate result from the first search step (Fig. 12, item 1202), where the search device is also designed to execute a second search step (Fig. 12, item 1208) in the intermediate result from the first search step (Fig. 12, item 1208) and to provide an end result from the second search step (Fig. 12, :”Skip to Jump Node”; Fig. 11).

As to claim 10, Karlov teaches apparatus, wherein the processing speed for (mere intended use) the data in the search device in the first search step is at least as high as the maximum or an instantaneous read-in speed for (intended use) the data into the search device (Col. 9, Line 3, “optimizing the search speed”).

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As to claim 11, Karlov teaches apparatus, wherein an exclusive text search can be performed in the search device during the first search step (Fig. 11, item 1102, “search character” meets “text search”; Fig. 12, item 1202).

As to claim 16, Karlov teaches apparatus, wherein the disk storage medium is an optical disk (Fig. 1, item 31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlov in view of Bettis et al, (US 2006/0161492 A1), hereinafter Bettis.

As to claim 4, Karlov does not expressly teach method, wherein the first search step involves skipping to search locations from an index list in descending or ascending order on the basis of sorting exclusively according to sector numbers.

Bettis teaches method, wherein the first search step involves skipping to search locations from an index list in descending or ascending order on the basis of sorting exclusively according to sector numbers (§[166, 186-187]).

[0166] Subsequently, a statistical measure of confidence in the investor's performance may be calculated for each return value 1014. As one example, a t-statistic or t-stat, taken in absolute terms, is

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utilized as this measure of confidence. The t-stat is a measure on a random sample (or pair of samples) in which a mean (or pair of means) appears in the numerator and an estimate of the numerator's standard deviation appears in the denominator. The latter estimate is based on the calculated sample variance estimates of the samples. Alternatively, other standard variance methods or some other similar index of variability may optionally be used in place of standard deviation...

[0186] In accordance with the principles of the present invention, one example of proven buy industry score generation is depicted with reference to FIG. 14. In particular, buy industry score generation commences with the grouping of investors into industry sectors 1472. After grouping into industries, processing continues with sorting of the investors in the industry sector into descending (or ascending) raw buy score order 1474. Then, if there are one-hundred or more investors in the particular industry, the investors are divided or separated into 100 substantially equally sized groups 1476, according to the descending (or ascending) order. If there are less than one-hundred investors in the industry, each investor constitutes an entire group. Each group is subsequently assigned a rank 1478,...

[0187] A similar procedure is utilized to rank the investors with respect to proven sell industry scores, as depicted in FIG. 15. Thus, this procedure is only briefly summarized here. Specifically, the investors are grouped into industry sectors 1572, sorted into descending (or ascending) proven sell industry score order 1574, separated into equally sized groups 1576, and then assigned a rank 1578. This procedure may optionally be repeated for each industry 1580, in a similar manner as discussed above.

Karlov and Bettis are analogous art pertinent to the problem to be solved. A skilled artisan would have been motivated to combine Karlov and Bettis because it provides for a ranked list of investors as discussed in Bettis, Abstract.

Therefore at the time of invention, it would have been obvious to a person having ordinary skill in the art to combine Karlov and Bettis because it provides for a ranked list of investors as suggested in Bettis, Abstract.

As to claim 12, Karlov does not expressly teach apparatus, wherein the first search step may involve the search device skipping to search locations from an index list in descending or ascending order on the basis of sorting exclusively according to sector numbers.

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However, Bettis as applied above teaches apparatus, wherein the first search step may involve the search device skipping to search locations from an index list in descending or ascending order on the basis of sorting exclusively according to sector numbers ([166, 186-187]).

Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlov in view of Waddington et al, (US 5,850,547), hereinafter Waddington.

As to claim 5, Karlov teaches method, wherein the intermediate result comprises one or more subresults which are respectively searched in the second search step.

Waddington teaches method, wherein the intermediate result comprises one or more subresults which are respectively searched in the second search step (Col. 5, Lines 1-31, "subset of data includes rows...intermediate aggregation according to the first serial query...the first serial query are then sorted and passed to a second process and the second process set performs the final query").

Each process set then performs an intermediate aggregation according to the first serial query : "SELECT SEX, AVG.sub.-- intermediate (AGE) FROM emp.sub.-- subset GROUP BY SEX." The results of the first serial query are then sorted and passed to a second process set and the second process set performs the final query: "SELECT AVG.sub.-- final (T1.AGL) FROM T1 GROUP BY SEX." The final output is an average age for males and an average age for females.

Karlov and Waddington are analogous art pertinent to the problem to be solved. A skilled artisan would have been motivated to combine Karlov and Waddington because it provides for overcoming limits to the degree of parallelism as discussed in Waddington, Col. 1, Lines 40-50.

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Therefore at the time of invention, it would have been obvious to a person having ordinary skill in the art to combine Karlov and Waddington because it provides for overcoming limits to the degree of parallelism as suggested in Waddington, Col. 1, Lines 40-50.

As to claim 13, Karlov does not expressly teach apparatus, wherein the intermediate result which can be stored in the memory device comprises one or more subresults which can be searched by the search device in the second search step.

However, Waddington as applied above teaches apparatus, wherein the intermediate result which can be stored in the memory device comprises one or more subresults which can be searched by the search device in the second search step (Col. 5, Lines 1-31, “subset of data includes rows...intermediate aggregation according to the first serial query...the first serial query are then sorted and passed to a second process and the second process set performs the final query”).

Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlov in view of Saeijs et al, (US 6,760,542), hereinafter Saeijs.

As to claim 6, Karlov does not expressly teach method, wherein the database is dynamic and is available in fragmented form and in this context the individual fragments are read in successively and a read head skips exclusively in one direction between the fragments.

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Saeijs teaches method, wherein the database is dynamic and is available in fragmented form and in this context the individual fragments are read in successively and a read head skips exclusively in one direction between the fragments (Col. 11, Lines 8-16).

The read time for reading the portions x, y and z, shown in FIG. 5, can be further decreased by re-ordering the read steps of the portions x, y and z, into a, b and c, with $[a,b,c]=[x,y,z]$, such that the time required for reaching and reading the portions x, y and z, inclusive the jump times between the reading steps of reading the portions x, y and z, and inclusive the jump to the position where the next fragment area should be recorded, is minimal. Large jumps in the radial direction

Karlov and Saeijs are analogous art pertinent to the problem to be solved. A skilled artisan would have been motivated to combine Karlov and Saeijs because it provides for the minimum number of jumps and therefore the maximum performance as discussed in Saeijs, Abstract.

Therefore at the time of invention, it would have been obvious to a person having ordinary skill in the art to combine Karlov and Saeijs because it provides for the minimum number of jumps and therefore the maximum performance as suggested in Saeijs, Abstract.

As to claim 14, Karlov does not expressly teach apparatus, wherein the database is dynamic and is available in fragmented form and in this context the individual fragments can be read into the search device successively and a read head can skip exclusively in one direction between the fragments.

Saeijs as applied above teaches apparatus, wherein the database is dynamic and is available in fragmented form and in this context the individual fragments can be read into the search device successively and a read head can skip exclusively in one direction between the fragments (Col. 11, Lines 8-16).

Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlov in view of Wicki et al, (US 2003/0200404), hereinafter Wicki.

As to claim 7, Karlov does not expressly teach method, wherein the data are stored on the disk storage medium in ECC blocks.

However, Wicki teaches method, wherein the data are stored on the disk storage medium in ECC blocks (Claim 39).

39. The cache controller recited in claim 35, wherein: logic that stores a first tag data in a first storage location in a memory device further comprises logic that stores error correction code data in the first storage location in the memory device; and logic that stores a second tag data in a second storage location in a memory device further comprises logic that stores error correction code data in the second storage location in the memory device.

Karlov and Wicki are analogous art pertinent to the problem to be solved. A skilled artisan would have been motivated to combine Karlov and Wicki because it provides for fully utilizing burst efficiencies during snoop and invalidation operations as discussed in Wicki, Abstract.

Therefore at the time of invention, it would have been obvious to a person having ordinary skill in the art to combine Karlov and Wicki because it provides for fully utilizing burst efficiencies during snoop and invalidation operations as suggested in Wicki, Abstract.

As to claim 15, Karlov does not expressly teach apparatus, wherein the search device and the memory device are suitable for processing ECC blocks.

However, Wicki as applied above teaches apparatus, wherein the search device and the memory device are suitable for processing ECC blocks (Claim 39).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Wong whose telephone number is 571-270-1015. The examiner can normally be reached on Mondays through Fridays from 10 AM - 6 PM.

Applicant initiated interviews may be formally requested in advance by faxing a completed PTO-413A form to the Examiner's personal fax number at 571-270-2015. Form PTO-413A is used by the Examiner to prepare for any proposed interview. A detailed agenda listing should be attached including any proposed claim language and/or arguments that will be presented. This form is used to determine whether any proposed interview would advance prosecution and fit within a prescribed time limit.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

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free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JDW/

Asst. Examiner, Art Unit 2166

19 May 2009

/S. L./, May 16, 2009

/Hosain T Alam/

Supervisory Patent Examiner, Art Unit 2166